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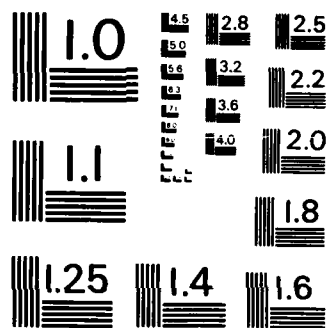
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THESIS

Wesley W. Westbrook
Captain, USAF

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FACTORS ON JOB BEHAVIOR

THESIS

Presented to the Faculty of the School of Systems and Logistics
of the Air Force Institute of Technology
Air University
In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Logistics Management

Wesley W. Westbrook, B.S.
Captain, USAF

September 1985

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Table of Contents

	Page
Acknowledgments	ii
List of Figures	v
List of Tables	vi
Abstract	vii
I. Introduction	1
Motivation and Human Behavior	1
Purpose	2
II. Motivation; Theories and Research	4
Literary Review	4
Unified Models	15
Systems Perspective	18
Assumptions (A) and Hypotheses (H)	21
III. Methodology	24
The Instrument	24
The Population	25
Administration of the Instrument	25
Compilation of Data	26
Data Analysis	26
IV. Results	31
Respondents	31
Test of Hypotheses	31
V. Discussion	42
Results of Major Hypotheses	42
VI. Summary and Recommendations	48
Summary	48
Recommendations	50
Appendix A: Crawford Slip Survey	52
Appendix B: Conflict Survey	56

List of Figures

Figure		Page
1.	Revised Porter and Lawler Model	13
2.	Chung's Model	16

List of Tables

Table	Page
I. Personal Goals Reported Ranked by Relative Importance . . .	32
II. Professional Goals Reported Ranked by Relative Importance .	33
III. Personal Goal Scores by Age	34
IV. Personal Goal Scores by Sex	35
V. Personal Goal Scores by Years of Service	35
VI. Personal Goal Scores by Marital Status	35
VII. Compatibility Between Goals by Age	37
VIII. Conflict Between Goals by Age	37
IX. Compatibility Between Goals by Sex	38
X. Conflict Between Goals by Sex	39
XI. Compatibility Between Goals by Marital Status	40
XII. Conflict Between Goals by Marital Status	40
XIII. Resolution of Conflicts	41
XIV. Summary of Hypotheses and Results	43

Abstract

The basic premise of the systems theory is that entities within a system interact with the environment and other systems in a manner which makes it impossible to change or influence one entity without affecting all the other entities to some degree. This research attempted to treat the worker as an integral part of a system affected by two distinct environments, the Off-the-job environment, and the On-the-job environment. The major objective of the study was to determine which of the two environments has the stronger influence on the motivation factors in the individual; with the reasoning that the stronger of the two environmental influences will affect the individual's behavior in the other environment. Individual goals were selected as the measure of environmental influence on individuals for this study since goals should be the product of a person's needs and perceptions, two major determinants of motivation.

Survey participants were asked to list their personal and professional goals (using the Crawford Slip survey method), and then rank order the goals. A large majority of respondents ranked personal goals higher than professional goals indicating that the off-the-job environment has a greater influence on the factors which affect human motivation and thus, behavior within the test group. This was especially true for the younger participants (25 to 37). A summary of the major findings of this research effort is provided on the following page.

1. Individuals tend to have personal goals which are different than their professional goals.
2. An individual's personal goals tend to be of more importance to him/her than his/her professional goals.
3. Individuals sometimes experience conflict between their personal and professional goals.
4. Individuals most often resolve conflict between their personal and professional goals in favor of professional goals.

This research indicates a need to more closely examine the relationship between off-the-job environmental factors and motivation on the job. The implication is that the family and social influences have a greater potential for determining those things which will result in individual motivation than do factors on the job.

THE INFLUENCE OF ENVIRONMENTAL FACTORS ON JOB BEHAVIOR

I. Introduction

Motivation and Human Behavior

Motivation in the Organization. One of the major concerns of management is the motivation of employees. If the management of an organization can determine the major factors which motivate its employees, then management can better adjust the organization/employee relationship to improve employee performance at lower costs to the organization.

To that end, a major concern of management is (or should be) the needs of employees. The needs of the individual are tied to motivation according to several theories (5;4;8). According to these theories, needs are the underlying basis of motivation which are then influenced by other factors such as perceptions and expectations, and ultimately result in human behavior. Additionally, employee needs must be met to ensure employee loyalty and to avoid costly turnover, strikes, etc. In effect, an organization attracts and maintains a group of employees through the needs of the individual. Whether that need is simply the desire for money or for some more complex combination of needs, these provide the basis for the formation and continued existence of groups and organizations. Otherwise, there would be no reason for individuals to join or stay with groups and organizations. Therefore, if management can better understand the underlying system of needs and motivation in human behavior, then management can better serve the interest of both the employee and the organization.

Given that it is impossible to identify all the variables contributing to human motivation, it is necessary to set some reasonable limit on the number of variables in a model. This limit is normally based on judgement, logic, the usefulness of the model, and the apparent validity of the model based on empirical evidence. In setting this limit for motivational research, previous researchers have tried to draw boundaries around the worker and his/her job environment, thus, limiting their studies to the interaction between the worker and the organization. This has helped reduce the number of variables researchers have had to investigate, but it may also have distorted the picture because the worker is also affected by factors outside the organization.

Purpose

The research reported in this thesis attempted to treat the worker as an integral part of two systems; the organizational system on the job and the home/social system off the job. The emphasis was to determine if the influence of the off-the-job system (home/social) affect the worker's motivation to perform in the on-the-job (organizational) setting.

Conditions outside the workplace have strong influences on job performance. Undoubtedly, outside influences cause the employee to seek employment in the first place. It is unconceivable to think that organizations cause the individual to want to work except through the organizations ability to provide some thing of value (either intrinsically or extrinsically) to the worker. Additionally, frustrations at home can lead to poor performance at work and the opposite is true as well. Therefore, an understanding of the outside influences on motivation

could provide management with new insight leading to the use of more effective management techniques.

This research effort is an attempt to establish a link between the off-the-job environmental influences and motivation on the job. Chapter II is a review of four major motivation theories and two integrated models of motivation. The integrated models are used as a basis for the research. Chapter III describes the methodology and Chapter IV presents the results of the research. Chapter V is a discussion of the implications of the research and Chapter IV presents the conclusions.

II. Motivation; Theories and Research

Literary Review.

Major Motivation Theories. There are four basic theories which in some way attempt to explain human behavior. These are:

- a. Need theories of motivation.
- b. Equity theory.
- c. Reinforcement theory and behavior modification.
- d. Expectancy/valence theory.

All of these theories have had their successes and failures in predicting human behavior. Steers and Porter review in detail these theories and studies thereof and make the following comments.

A central purpose of any theory is to organize in a meaningful fashion the major sets of variables associated with the topic under study. In fact, one test of the usefulness of a theory or model is the degree to which it can account for a wide diversity of variables while simultaneously integrating them into a cohesive--and succinct--unifying framework. Such a theory of work motivation would ideally account for variables from the three major areas discussed above (individual, job, and work environment), as well as consider the implications of interactive effects among these areas. Unfortunately, such a totally unifying theory does not appear to exist at this time. What does exist are a set of different theories that address themselves to one or more of these sets of variables but none of which are completely and thoroughly comprehensive (both in terms of hypothesized interaction effects among the variables, and in terms of accounting for a diverse array of evidence) [11:559].

Systems Perspective of Motivation. As is indicated by the quotation above, most recent research on work motivation has concentrated on the work environment, the job, and/or the individual. This is understandable since a major objective of this recent research was to

determine those stimuli which would motivate the worker or otherwise improve performance in the work place. It is, therefore, natural to assume that those stimuli would be found in the work environment. Additionally, the research has been somewhat fragmented due to the lack of a unifying model. As a result, the worker has been studied in relation to his or her work environment almost exclusively and the influences of conditions outside the work place have largely been ignored.

Possible reasons why these outside influences have not been studied in more of the recent motivation and performance research efforts are that management has little control over them, they are difficult to study, and researchers have believed that little benefit could be gained through incorporating them in their studies.

Behavioral Theories (3:2-6). The classical approach to management was to improve performance through scientific evaluation and improvement of the job; that is, reduce the job to its most simple form so that it could be performed as efficiently as possible (in a physical sense). This approach assumed that if paid an appropriate wage, the worker would be motivated to perform at his or her best. The dawning of the behavioral school of management thought came with the discovery that employee motivation and performance could be influenced by things other than money. Thus, the employee could no longer be considered a constant in the production and performance equation. Human motivation and behavior became the most important field of study for the management sciences.

Since that time, many theories and models have been developed to explain human motivation and behavior, and many studies have been

conducted to test these theories and models. Opinions seem to vary widely as to which model or theory is the best and it seems that some theories explain certain types of behavior better than others or tend to work better under certain conditions. The major theories are reviewed below starting with the need theories.

Need Models of Human Behavior. Need theory has several distinct variations (e.g. Maslow's hierarchy and the Atkinson model). In general, the need theories of motivation begin with the assumption that all normal people have certain basic needs or desires which in some manner determine their behavior in a given situation. Thus all motivation, and hence all human behavior, can be traced back to certain basic needs of the individual.

The logic of this approach is very easily understood when applied to the more elementary needs (e.g. food and shelter) but the theories become difficult to follow logically when one attempts to explain such higher order needs as achievement or self-actualization. The implication is that perhaps the need theories only apply for the lower order needs or that the process is more complex for higher level needs. In either case, it does seem apparent that needs do have some influence on human motivation and behavior.

Maslow's Hierarchy of Needs. Maslow's "Theory of Human Motivation" had a strong influence on the behavioral sciences. Maslow summarized his theory thus:

1. There are at least five sets of goals which we may call basic needs. These are briefly physiological, safety, love, esteem, and self-actualization.
2. These basic goals are related to one another, being arranged in a hierarchy of prepotency. This means that the

most prepotent goal will monopolize consciousness and will tend of itself to organize the recruitment of the various capacities of the organism. The less prepotent needs are minimized, even forgotten or denied. But when a need is fairly well satisfied, the next prepotent ("higher") need emerges, in turn to dominate the conscious life and to serve as the center of organization of behavior, since gratified needs are not active motivators. . . . Reversals of the average order of the hierarchy are sometimes observed. . . .

3. Any thwarting or possibility of thwarting of these basic human goals, or danger to the defenses which protect them or to the conditions upon which they rest, is considered to be a psychological threat. . . . It is such basic threats which bring about the general emergency reactions.

5. Certain other basic problems have not been dealt with . . . Among these are (a) the problem of values in any definitive motivation theory, . . . (c) the etiology of the basic needs and their possible derivation in early childhood, . . . (g) the role of association, habit, and conditioning, (h) relation to the theory of interpersonal relation, . . . (j) implication for theory of society, . . . (l) the relation between needs and cultural patterns, . . . [5:46].

Problems With Hierarchy. As part five indicates, Maslow did not see his theory as all encompassing or "The One and Only Answer" but more as a place to start looking for the answers. His theory has been attacked from all quarters but most fiercely due to his model's lack of flexibility. Wahba and Bridwell conclude. . .

. . . Maslow's Need Hierarchy Theory has received little clear or consistent support from the available research findings. Some of Maslow's propositions are totally rejected, while others receive mixed and questionable support at best. The descriptive validity of Maslow's Need Classification scheme is not established, although there are some indications that low-order and high-order needs may form some kind of hierarchy. . .

. . . if we accept such a limited view of needs, the remaining question should be, why should needs be structured in a fixed hierarchy? Does this hierarchy vary for different people? What happens to the hierarchy over time? How can we have a fixed hierarchy when behavior is multideterminate [12:52-53]?

Certainly these seem to be valid questions of Maslow's basic theory. However, Maslow does address some of these questions such as his comment in part 2 above, "Reversals of the average order of the hierarchy are sometimes observed." which seems to indicate a recognition that "the hierarchy" might not be exactly the same for everyone. Still, the theory is not totally satisfactory. Others such as Atkinson, have made alterations to the basic theory that have met with greater success.

Atkinson Model. The Atkinson model of motivation and behavior combines need theory and expectancy theory to a degree, to define a more flexible explanation of human behavior. The Atkinson model can be summarized as follows.

Specifically, the Atkinson model holds that AROUSED MOTIVATION (to strive for a particular kind of satisfaction or goal) is a joint multiplicative function of (a) the STRENGTH OF THE BASIC MOTIVE [M], (b) the EXPECTANCY of attaining the goal [E], and (c) the PERCEIVED INCENTIVE VALUE of the particular goal [I]. The model can be summarized as follows:

$$\text{AROUSSED MOTIVATION} = M \times E \times I$$

[4:55-56]

Implications of Atkinson's Model. The inherent flexibility of the Atkinson model is obvious. It should be noted that the "strength of the basic motive" [M] is similar to the basic needs described by Maslow and is not the same as motivation. According to Litwin and Stringer, the Atkinson model "was developed to explain behavior and performance related to the need for achievement" [4:57]. The model has also been used to explain behavior related to the "need for power" and the "need for affiliation."

Litwin and Stringer summarize the implications of the model as the ability to identify and influence "expectancies and incentives

associated with a motive network" (5:65) and thereby enhance motivation and behavioral tendencies. Litwin and Stringer further indicate that by careful selection and placement of personnel, a manager will be able to "fit" the person to the job and to those motivational factors which will produce the best results (5:65).

Problems With Need Models. There seem to be some inherent problems with this type of motivational theory. In general, need models assume that the basic motives or needs are "conceptualized as relatively stable characteristics of persons" [11:69]. Thus, a person's basic needs or motives cannot change except over an extended period of time according to the model. Therefore, the need theories generally hold that the basic needs are learned or otherwise acquired during early childhood and remain relatively unchanged in the adult. This does not seem to be a reasonable assumption since people learn and change throughout their lives, almost on a daily basis. What mother has sent her son off to join the army and seen him return unchanged? Which couple after twenty years of marriage can say that they are still the same as the day they met? Life is a growing, learning process which causes frequent changes in an individual's needs and perceptions.

Secondly, the need models assume a causal effect between satisfaction of needs on the job and performance at work. Thus, the better the job satisfies the person's needs, the better the performance attained. This job satisfaction-performance relationship has not been well established by empirical evidence (9:38). It is just as possible that good job performance leads to satisfaction or that the relationship is much more complicated.

Thirdly, the implication for management that every job must be tailored to suit the employee and/or that the employee must be hand picked for the job seems to be expensive and unreasonable.

Thus, the need theories are widely accepted and widely rejected at the same time. They are in fact too limited in their scope to explain a very large number of variables in human behavior and motivation.

Equity Theory. Equity theory deals with an individual's interactions in the work environment to variations in the rewards structure. It is related to expectancy theory in that equity theory provides the mechanism through which expectancy theory can operate. It is, in effect, a feedback loop through which an individual compares his effort and resultant rewards to others' efforts and rewards and thereby determines the level of equity in the system. A lack of equity would then result in dissatisfaction with the system and motivation to change something to achieve a balanced equity perception. Steers and Porter summarize equity theory in the following manner.

Equity theory (as delineated by Adams) centers around the relationship between individual characteristics--attitudes toward inputs and outcomes, tolerance for feelings of inequity, and the like--and work environment characteristics (especially systemwide reward practices). This process-oriented approach does place considerable stress on the individual's perceptual reactions to environmental variables, and in that sense the theory considers interactive effects. The approach does not, however, provide a comprehensive framework for integrating the major sets of variables affecting motivation at work, and in particular fails to consider many of the other impacts of the variables (besides producing feelings of equity or inequity) [11:560].

Utility of Equity Theory. Mowday conducted an extensive review of equity theory research which revealed mixed results in the

testing of the theory (6:129,134). In general, a large number of researchers concluded that equity theory can be incorporated into expectancy theory, at least in the organizational setting [6:141]. In the field of social psychology; however, the theory is still widely used and researched. One of Mowday's more interesting points is the lack of research in the area of equity theory as applied to interpersonal relationships. He suggests . . .

Individuals in organizations, for example, may purposely create perceived inequity in social relationships as a way of improving their situation or achieving certain goals. Supervisors may routinely attempt to convince employees that they are not contributing as much as another employee or at a level expected for the pay they receive. Creating perceptions of overpayment inequity may therefore be viewed as a strategy designed to increase the level of employee performance. Just as routinely, employees may attempt the same strategy, but in reverse [6:142].

While this scenario does not validate the equity theory, it does indicate a wide acceptance of the usefulness of the major concepts embodied therein. Mowday concludes, "Equity theory appears to offer a useful approach to understanding a wide variety of social relationships in the workplace" [6:143].

Expectancy Models. Expectancy theory uses probabilities to describe an individual's motivation in terms of perceptions that an event will occur, that the event will produce the expected outcome, and that the outcome has value for the individual. This model has produced good results in empirical studies (7:220).

. . . expectancy/valence theory can be examined in terms of how it deals with the three major sets of variables--individual, job, and work environment. To begin with the theory is specific in dealing with the role of individual differences. . . . acknowledging that not everyone values the same rewards equally; . . . the model particularly emphasizes that individuals have differing beliefs, or

expectancies, that certain actions on their part will ultimately lead to desired rewards. Expectancy/valence theory also encompasses job-related variables by pointing to how these factors serve as sources of intrinsically valued rewards. . . [11:560-61].

Expectancy Theory Research. Porter and Lawler conducted a study of managers using expectancy theory with pay as . . . reward which indicated that performance is the end result of:

- a. The actual effort which is a product of the perceived value of the reward and the perceived effort/reward probability.
- b. The individual's abilities and traits.
- c. The individual's perception of his/her role in the organization (the direction of the effort).

The actual performance then has a feedback effect on future effort/reward probabilities and leads to actual rewards. The actual rewards are then compared to the perceived equitable rewards (expected rewards) to determine a degree of satisfaction. Satisfaction then forms a feedback loop to future values of rewards (9:15-40).

As a result of their research and analysis, Porter and Lawler revised their model to include two types of rewards, extrinsic and intrinsic. They concluded that intrinsic rewards, "are more likely to produce attitudes about satisfaction that are significantly related to performance. . ." [9:163]. Additionally, a connection was drawn from performance to perceived equitable rewards to, "depict the fact that self-ratings of performance seem to act rather directly upon this variable" [9:164]. The model does tend to combine equity theory and expectancy theory to good effect (see figure 1).

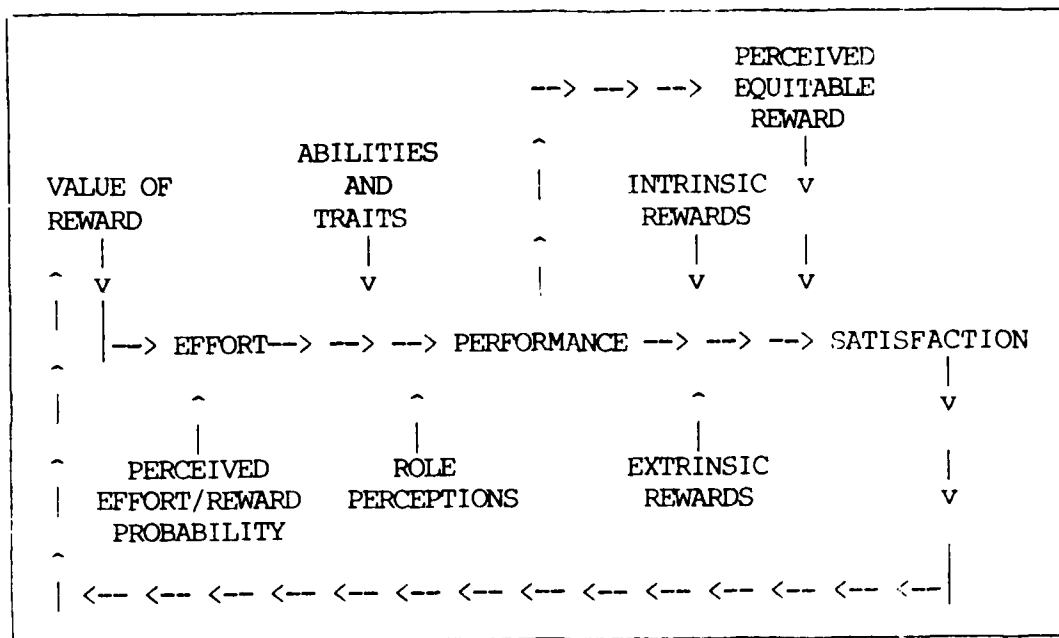


Figure 1. Revised Porter and Lawler Model [9:222]

Reinforcement Theory. The basic concept underlying reinforcement theory is that individual behavior is acquired through the learning process and thus can be altered or manipulated through the learning process. It is in some ways related to expectancy theory in that positive incentives or rewards and negative incentives or punishments are used to entice the individual to perform in the desired fashion, or to "learn" the desired behavior.

The process is similar to that which one would use to train a puppy to sit on command. The puppy is shown what it is supposed to do upon hearing the command and then rewarded each time it performs correctly. If the process is repeated often enough, the puppy soon "learns" to sit whenever it hears the command "sit." After a time, the puppy will perform correctly even if the rewards are only given occasionally. This

is in fact, the formation of a habitual pattern of behavior through the use of positive incentives.

Applicability of Reinforcement Theory. According to Steers and Porter, ". . . recent work on behavior modification in work organizations is impressive in terms of results" [11:149]. Even so, there are some problems associated with practical applications. Among these are (a) social influences such as group norms, (b) gaining the employees' trust (c) influences from outside the work area such as family and friends (11:149).

Even though some problems may exist in the practical application of reinforcement theory, the theory is well supported by research and has enjoyed some success in practical applications (11:147). Almost anyone would agree that people would tend to repeat those actions which resulted in desirable consequences and to avoid those which resulted in undesirable consequences. Thus, reinforcement theory seems to have merit.

Limitations of Reinforcement Theory. Reinforcement theory tends to have a limited focus on the behavior of the individual. As Steers and Porter put it:

Of all the theoretical approaches considered in this book, reinforcement theory (behavior modification) is the one that places by far the heaviest emphasis on the work environment cluster of variables. . . . The notion of individual differences, and particularly the notion of individual needs and attitudes, is virtually ignored by this approach. Rather . . . the reinforcement approach to explaining behavior is epitomized by the phrase "behavior is a function of its consequences" [11:560].

Therefore, even though it may work in some, or even most instances, it is certainly not an all-encompassing approach.

Unified Models

Limitations of Individual Models. All of the need models appear to be difficult to prove and meet with strong opposition. Yet, the need theories of motivation are still taught in management schools and are widely accepted in the management field. Even though no one seems able to tie the needs and performance relationship into a neat package, it still has appeal because it seems so logical to most people.

Likewise, the expectancy, reinforcement and equity models all seem to have their usefulness and their limitations. None is all-encompassing and yet each explains certain types of behavior very well. Steers and Porter emphasize the complimentary nature of these major theories. In fact, they may be more than complimentary, they may be compatible components of a more comprehensive theory. By combining the various models, it is possible to develop a more complete picture of motivated human behavior as has been accomplished by Chung, and Naylor et. al.

Chung's Model (2). Chung proposes an integrated model of motivation which includes both needs and incentives as inputs to behavior. Chung's model is very useful and combines some aspects of human behavior which are not included in some of the earlier models (i.e. the Porter and Lawler model) (9). It does not, however, include some other important characteristics such as equity of rewards and the possibility of intrinsic rewards nor does it address possible effects of off the job motivational influences which will be addressed in more detail later.

In his model, Chung identifies needs as internal stimuli and incentives as external stimuli, both of which influence the individual's perceptions. The individual's perceptions are further influenced by the

person's ability. Perceptions then determine the individual's motivation through expectancy of (1) effort leading to performance, (2) performance leading to rewards, and (3) the value of the rewards in satisfying his/her needs. Motivation combined with ability then produce performance. Performance in turn results in rewards and satisfaction for the individual as well as productivity. Satisfaction then influences the individual's needs and productivity influences the incentives offered (see figure 2).

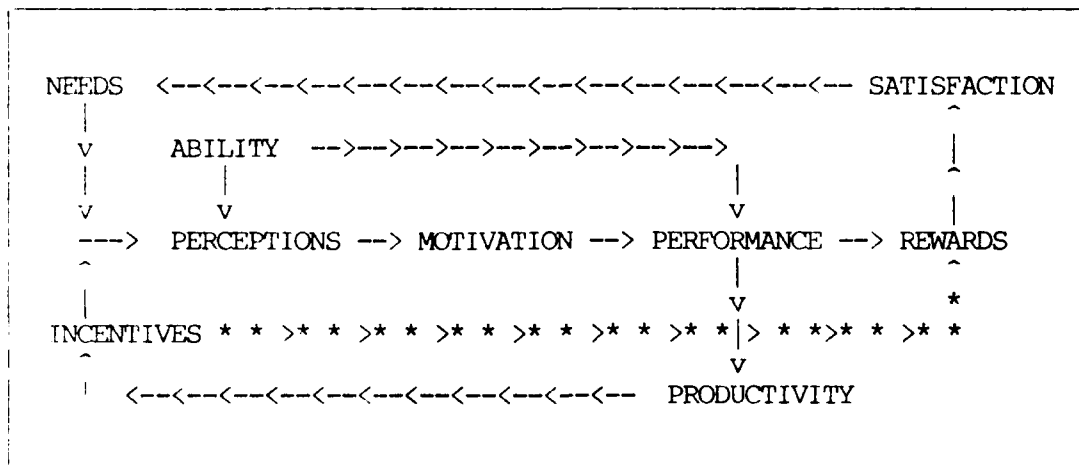


Figure 2. Chung's Model [2:9]

Naylor et. al. Model (8). Since Steers and Porter identified the lack of a unifying theory, at least one other attempt at an integrated theory has been published. Naylor, Pritchard, and Ilgen present a very comprehensive and complex theory which combines factors from the most accepted theories of human behavior into a cohesive and logical framework. The Naylor et. al. theory presents a very complete picture of human behavior either in or out of an organization. While some experts might argue some small points in the theory as presented by Naylor et.

al., the theory is built on the solid foundation of extensive study conducted by many respected researchers over the years.

The only problem with the theory seems to be its complexity. While a certain level of complexity is necessary for a thorough understanding of human behavior, the level of complexity presented by Naylor et. al. may have gone far beyond that necessary for effective use by managers. Even with the level of complexity in the Naylor et. al. model, effects of off-the-job influences are not adequately addressed to indicate the probable impact of the off-the-job environment on motivational programs on the job.

Utility of Unified Models Both of these works are significant additions to the human behavior literature. Chung's model is easily understood and presents a very useful tool to the manager. Its only limitation is the lack of incorporation of some important variables. In contrast, the theory presented by Naylor et. al. includes virtually all imaginable characteristics, but its usefulness to managers is questionable, as is its treatment of environmental influences.

Yet the overall inference which can be drawn from these models of human motivation and behavior is that motivation and behavior are the results of a complex process in which an individual feels a need for some form of satisfaction which causes the individual to seek (either consciously or subconsciously) a means of receiving the needed satisfaction. The environment then influences the individual through the perception of the availability or non-availability of satisfying rewards. The individual through his or her perceptions of self (abilities) and the environment determines certain expectancies (again either

consciously or subconsciously) such as (1) the expectancy that expended effort will result in task performance (E-P), (2) the expectancy of the task performance resulting in rewards (E-R), (3) the expected value of the expected rewards toward the satisfaction of the underlying need (E-V).

The individual then performs a type of cost/benefit analysis through some unexplained mental process (which is probably different for each individual) which results in some level of motivation. The level of motivation then leads to behavior which results in a level of performance. Performance results in rewards which produce a level of satisfaction and provide feedback which alters the individual's needs and perceptions of the environment.

Systems Perspective

For a model to have the broadest base of application it is necessary to avoid the temptation of over-simplification. The basic premise of the systems theory is that entities within a system interact with the environment and other systems in a manner which makes it impossible to change or influence one entity without affecting all the other entities to some degree.

Environmental Influences. The worker interacts with the environment on a daily basis both on and off the job. This environment can be called the "General Environment" to indicate that it is all-encompassing. Furthermore, the general environment can be divided into two broad categories, the "On-the-job Environment" and the "Off-the-job Environment." The off-the-job environment could be further divided into categories such as the "Family Environment" and the "Social

Environment."

If in fact the off-the-job environment does affect motivation and behavior, then it must do so through some process which is not clearly defined in the models and theories. It is this author's belief that a person's level of motivation on-the-job is significantly affected by the off-the-job environment through the individual's need satisfaction/deprivation, and through influences on individual perceptions of ability, E-P, E-R, and E-V. For example, an individual's perception of his/her ability could be significantly influenced by his/her family as could the perceived value of available rewards. Also, a person's level of need satisfaction could be altered by off-the-job activities which provided some or all of the required satisfaction for a given need.

The Motivation Process. The motivation to perform on the job is closely related to the motivation to achieve a personal goal. For example, assume an individual in the general environment having a set of needs and perceptions which are influenced by that environment. The needs of the individual cause the person to seek satisfaction of those needs. Through his/her perceptions, the individual examines the available rewards and determines the probability of achieving various goals which will result in the individual receiving the desired rewards. The strength of the need multiplied by the perceived expectancies (E-P, E-R, and E-V) for each of the goals results in a level of motivation to achieve that goal. It is of little consequence whether the goal is increased production on the job, or playing better golf off the job, the factors and processes which determined the level of motivation are very much the same. In other words, goals are established as a result of a

perceptual process which seeks to find ways to satisfy needs.

Individual Goals as a Measure of Environmental Influences. The influence of the general environment on individual behavior in organizations is difficult to measure. Yet, if the influences of the general environment act on a person's needs and perceptions, then it is logical to assume that those influences would manifest themselves in some measurable fashion in the individual. The goals a person sets for him/herself seem to be a reasonable measure of that influence. A goal can be defined as "an end that one strives to attain." These individual goals are not assigned to the person, but are selected from the multitude of goals available due to an individual's own needs and perceptions. If an individual selects a goal, one must assume that the individual is motivated to some degree to achieve it, or else it would not be a goal. Therefore, an individual's most important goals should closely reflect those things which the individual is most motivated to attain, since the choice of one goal necessarily implies the foregoing of another.

If the environment can be broken down into two relatively separate environments (on-the-job and off-the-job) and an individual's goals can be divided into two corresponding categories, then one should be able to measure the relative influence of the off-the-job environment on the individual as compared to the influence of the on-the-job environment. Two such categories would be personal goals (those goals which can be achieved off the job) and professional goals (those goals which can be achieved on the job).

It is logical to assume that the off-the-job environment would have the greater influence on personal goals and that the on-the-job

environment would have the greater influence on professional goals. This logic would tend to lead one to conclude that to influence a person's on-the-job performance, one need only consider the on-the-job environment; however, since individuals are the same people both on and off the job, both environments affect a single set of needs and perceptions in the individual. Therefore, if the off-the-job environment has a greater influence on an individual (resulting in personal goals being most important), then it is also quite probable that those same off-the-job environmental influences are affecting motivation on the job through the individual's needs and perceptions. If this is the case (and assuming that an individual has only one set of needs and perceptions), then it is logical to suspect that the off-the-job environmental influences can modify behavior on the job.

If one accepts the argument that one's environment will influence his/her needs and perceptions, then one is compelled to believe that an individual's goals (which are determined by those same needs and perceptions) will reflect that environmental influence. A measure of this influence would be a comparison of the importance of an individual's personal goals to the importance of his/her professional goals. If the off-the-job environment does have a significant influence on the individual, then people should have personal goals which are different from and more important than their professional goals.

Assumptions (A) and Hypotheses (H).

In order to test a hypothesis, it is first necessary to identify any assumptions which are made. The assumptions that follow were required in the development of the testing instrument. Assumption A1 is

the basic reason for this research. Assumption A2 is the key link between A1 and the testing instrument. Assumption A3 will be validated or invalidated by the testing instrument. Assumptions A4 and A5 are necessary to draw logical conclusions from the test data.

Hypotheses H1, H2, H7, and H11 are the major hypotheses of the research effort. Hypothesis H1 is the foundation for the other hypotheses and is essential for the successful testing of the hypotheses which follow. If H1 is not supported, then one cannot test H2 and there will be no conflict to measure in H7 and H11. Hypotheses H3, H4, H5, H6, H8, H9, and H10 are hypotheses about differences between demographic categories and are not central to the support of the major hypotheses or the research effort.

A1: The off-the-job environment influences a person's motivation and behavior on the job through his/her needs and perceptions.

A2: This influence will manifest itself in the development of an individual's goals.

A3: An individual's goals can be divided into two distinct categories, personal and professional.

A4: The off-the-job environment will have a stronger influence on an individual's personal goals than will the on-the-job environment.

A5: The on-the-job environment will have a stronger influence on an individual's professional goals than will the off-the job environment.

- H1: The personal goals an individual has will be different than the professional goals that individual has.
- H2: An individual's personal goals will be of more importance to him/her than his/her professional goals.
- H3: Older individuals will place a greater importance on personal goals than will younger individuals.
- H4: Females will place greater importance on personal goals than will males.
- H5: Individuals with more years of service will place more importance on personal goals.
- H6: Married individuals will place greater value on personal goals than will singles.
- H7: An individual's personal goals will sometimes conflict with their professional goals.
- H8: Older individuals will experience less conflict between personal and professional goals.
- H9: Females will report more conflict between personal and professional goals.
- H10: Married individuals will report more conflict between personal and professional goals than singles.
- H11: If a conflict exist between accomplishment of personal and professional goals, an individual will tend to favor accomplishment of the personal goals over the professional.

III. Methodology

The Instrument

Slip Survey. In order to test the eleven hypotheses outlined in Chapter II, it was necessary to gather data from individuals on their personal and professional goals and on the extent to which they experienced conflict between their personal and professional goals.

After examination of several possible data collection methods, the Crawford Slip survey method was selected as the best alternative. The slip survey method allowed the data to be collected in parts so that the subjects did not know what was required on the next part. Therefore, the possibility of bias was reduced.

The Crawford Slip method was given in three parts. The first part asked the subjects to describe specifically their three most important professional goals, each on a separate slip of paper. The second part asked the respondents to describe their three most important personal goals, each on a separate slip of paper. The third part of the slip survey required the subjects to physically arrange the six slips of paper in order of their importance and to record the results. The result was a list of the respondent's three most important personal and three most important professional goals rank ordered from the most important to the least important (see Appendix A).

Measurement of Conflict. Additionally, a survey was designed and administered to determine the relative amounts of conflict people experience between their personal and professional goals and to determine if these conflicts were most often resolved in favor of personal goals or

professional goals. This survey contained Likert-type questions to determine the levels of conflict (see Appendix B).

The Population

The design of the research required that the data be collected by a survey monitor in a controlled environment. Therefore, it was necessary for respondents to participate in the Crawford Slip method and take the survey at specific times and places when classrooms were available. Considering these limitations and the fact that the hypotheses should be applicable to any group of respondents, the population selected consisted of graduate students in two classes (85S and 86S), faculty, and staff at the AFIT School of Systems and Logistics. The total population consisted of approximately 320 students and 130 faculty and staff.

Administration of the Instruments

The Crawford Slip method and the survey were designed so that all the necessary instructions were included on the instruments, thereby reducing any risk of administratively induced error or bias. The data was collected during the lunch hour for five consecutive days with respondents participating voluntarily. The first part of the Crawford Slip instrument gathered demographic data on each individual as well as the individual's professional goals (listed on the slips provided). Upon completion of the first part, the individuals were instructed to contact the survey monitor to receive the second part. After listing their personal goals for the second part, individuals again contacted the survey monitor to receive the third part where all the goals were then rank ordered. Following completion of the third part, part four

was administered to gather data on conflicts between personal and professional goals.

Compilation of Data

The data was compiled from the surveys by hand and converted to numeric code for easy computer manipulation. The code was double checked to ensure the data entered in the computer program corresponded to the responses on the surveys. The data was entered into a computer spreadsheet program which was capable of breaking the raw data into categories and doing the necessary statistical calculations to determine if the various hypotheses were supported.

Data Analysis

Nonparametric statistical techniques were selected to evaluate the significance of the results of the survey because they require fewer assumptions about the population distributions. Additionally, the computation of parametric statistics requires the addition, multiplication, and division of the scores of the samples. Since this survey (and most other surveys in the behavioral sciences) produces results that are not truly numeric in nature, it is possible that these numeric operations would induce distortions into the data (10:vii-3). Therefore, nonparametric methods were selected for this research effort.

Hypothesis One. H1: The personal goals an individual has will be different than the professional goals that individual has. The determination as to whether the personal goals an individual reports are substantially different from the professional goals that same individual reports is highly subjective in nature, and therefore requires a

significant amount of judgment on the part of the researcher. Since the judgment of a group is generally regarded as more reliable than that of the individual, a panel of three graduate students was selected to render these evaluations.

Each member of the group was asked to read the goals reported by the respondents and to segregate any instruments which caused them to question whether the respondent's personal and professional goals were different. After everyone in the group had evaluated all the responses, the segregated instruments were re-evaluated by the group. The group discussed the implications of the reported goals in respect to the definitions of personal and professional goals provided in the instrument and made a determination. All final decisions were unanimously supported by the group.

Hypothesis Two. **H2: An individual's personal goals will be of more importance to him/her than his/her professional goals.** The easiest method of determining whether personal goals are more important to individuals than professional goals is to simply determine the percentage of respondents who ranked a personal goal first in part three of the Crawford Slip method. While this provides an indication of the preferences, there could be some difficulty in drawing significant conclusions based on this statistic alone since there is no real means of measuring how much more important one goal is relative to another. Therefore, the percentage of personal goals reported in each rank were also computed under the assumption that the number of personal goals would be greater in the top three ranks and the inverse would hold true for the professional goals.

Additionally, a points system was devised to provide another test which could be used as an indication of preference. That is, each ranking (one through six) was assigned a point value ranging in two point increments from 10 for the highest rank to zero for the lowest. Every goal reported on a survey was thus assigned points in accordance with its rank position. Therefore, there was a total score of 30 points assigned to each survey which meant that the expected mean score for either personal or professional goals would be 15 if the respondents ranked personal and professional goals equally high.

A "personal goal score" was calculated by adding the points assigned to the personal goals only. The highest possible personal goal score was 24 and the lowest possible personal goal score was 6. The sum of the personal goal scores was divided by the number of personal goals reported to find the mean personal goal score for the group. The expected mean personal goal score was 15. Deviations above the expected mean for this score would be an indication that the survey group placed more importance on personal goals than professional goals not only for their highest ranked goal, but for all the goals reported.

Hypotheses Three Through Six. The survey produced ordinal data in the ranking of the six goals in that goal number one is more important than goal number two which is more important than goal number three, etc. Since these surveys were independent, in that the responses given by one individual did not influence any responses given by any other individual, and since the demographic data is independent of the responses to the questions, there are several tests which could be used to test H3 through H6 listed on the following page.

- H3: Older individuals will place a greater importance on personal goals than will younger individuals.
- H4: Females will place greater importance on personal goals than will males.
- H5: Individuals with fewer years of service will place more importance on professional goals.
- H6: Married individuals will place greater value on personal goals than will singles.

The Median Test was selected since it is easily adapted to determine if two independent groups (not necessarily the same size) have been drawn from a population with the same median or central tendencies. Additionally, it makes use of the Chi Square test which will be used in other statistical evaluations in this research.

Hypothesis Seven. H7: An individual's personal goals will sometimes conflict with their professional goals. To determine if in fact conflict exists between personal and professional goals, respondents were asked to what degree their personal and professional goals were compatible. Likert scale responses were; (1) not at all compatible, (2) somewhat compatible, (3) not sure, (4) very much compatible, (5) completely compatible. Also, participants were asked if they currently experienced conflict between personal and professional goals. Again the Likert scale responses were; (1) not at all, (2) somewhat, (3) not sure, (4) very often, (5) always. Additionally, the respondents were simply asked if they had ever experienced such conflicts and these results were reported as straight percentages.

Hypotheses Eight Through Ten. The next three hypotheses were concerned with differences in the level of conflict between personal and professional goals between different groups and are listed below.

H8: Older individuals will experience less conflict between personal and professional goals.

H9: Females will report more conflict between personal and professional goals.

H10: Married individuals will report more conflict between personal and professional goals than singles.

Since the data was ordinal and from independent samples, the median test was again selected as the best method of comparison.

Hypothesis Eleven. **H11: If a conflict exist between accomplishment of personal and professional goals, an individual will tend to favor accomplishment of the personal goals over the professional.** To determine if individuals tend to favor accomplishment of personal goals over professional goals when there is a conflict, those that answered that they had experienced conflict were asked how such conflicts were most often resolved. The possible responses were; (1) in favor of personal goals, (2) in favor of professional goals, (3) in favor of both personal and professional goals, (4) at the expense of both professional and personal goals, (5) I did not resolve the conflicts. Support of the hypothesis would be indicated by the first answer being selected most often, or at least more often than the second answer.

Chapter IV reports the results of the nonparametric analysis of the data.

IV. RESULTS

Respondents

Of the 450 potential participants, 85 respondents took the survey which is an 18.8% response rate. The participant's age ranged from 25 to 64 years. There were 73 military officers who took the survey and 12 civilian employees of the U.S. Air Force. The ranks of the military officers ranged from first lieutenants to lieutenant colonels, while the civilian grades ranged from GM-12 to GS-13. The respondent's years of civilian or military service ranged from 3 to 40 years.

Fourteen females and 71 males took the survey. There were also 14 single individuals and 71 married individuals who took the survey. Thirteen of the participants were members of the faculty and staff of AFIT while the remaining 72 were graduate students. All but nine of the respondents had dependents. The average age was 33 and the average number of dependents was two. Their average years of civilian or military service was 10.

Tests of Hypotheses

Difference Between Goals. H1: **The personal goals an individual has will be different than the professional goals that individual has.** A panel of judges was used to determine if the goals reported as personal and professional were indeed different. The results reported by the panel were that of the 85 participants, only seven reported a personal goal which was essentially the same as a goal reported in the professional category. Two other respondents were found to have reported personal goals which were (by the definitions given in the instructions

of the survey) actually professional goals. Therefore, of the 85 respondents, 76 (89.4%) reported three personal goals which were different than their three professional goals indicating support for hypothesis one.

Rankings of Personal and Professional Goals H2: **An individual's personal goals will be of more importance to him/her than his/her professional goals.** The percentage of participants ranking a personal goal as the most important was 74.11%. While this percentage alone is not necessarily significant, the overall pattern of percentages for all rankings seems to support the second hypothesis. The total number of personal goals reported in each rank, and each rank's percentage of personal goals, are presented in Table I. Note the almost linear decline in the number of personal goals ranked in each category.

Table I.

Personal Goals Reported Ranked by Relative Importance*

Rank	<u>#1</u>	<u>#2</u>	<u>#3</u>	<u>#4</u>	<u>#5</u>	<u>#6</u>
Number of Personal Goals	62.5	55	39.5	44.5	27.5	26
Percentage by Rank	73%	65%	46%	52%	32%	30%

If the personal and professional goals reported in the survey had been equally important to the individuals, one would expect to see the number of personal goals reported in each rank near the 50% mark, or about 42.5 personal goals per category. Only ranks 3 and 4 are near this percentage with the personal goals being heavily weighted toward

* Those cases in which a respondent had a personal and a professional goal which were the same were counted as 0.5 in each rank category.

the first and second ranks and only lightly reported in the fifth and sixth ranks. Naturally, the inverse is true for the professional goals as shown in Table II.

Table II.

Professional Goals Reported Ranked by Relative Importance*

Rank	<u>#1</u>	<u>#2</u>	<u>#3</u>	<u>#4</u>	<u>#5</u>	<u>#6</u>
Number of Professional Goals	22.5	30	45.5	41.5	57.5	59
Percentage by Rank	26%	35%	53%	49%	68%	67%

To determine if the deviations noted above were significantly different than those one would expect if personal and professional goals were ranked the same, the Chi square test of a multinomial probability was performed. The Chi square statistic which resulted was 25.96 which was greater than the critical value of Chi square at the .005 level of significance with 5 degrees of freedom (16.74). The raw goal scores were also calculated for each participant. The mean raw goal score for the sample group was 18.08, well above the expected mean of 15. Therefore, the second hypothesis that personal goals are more important to individuals than their professional goals was strongly supported.

Personal Goal Preferences by Demographic Categories. **H3: Older individuals will place a greater importance on personal goals than will younger individuals.** The third hypothesis was not supported by the Crawford Slip method. In fact, the opposite was found to be true. The median test was used with the raw goal score computed for each

* Those cases in which a respondent had a personal and a professional goal which were the same were counted as 0.5 in each rank category.

respondent's ranking of personal and professional goals. The summary data and Chi square statistics are provided in Table III. At a level of significance of .05, the results indicated that the older group ranked personal goals lower than the mean (or that they ranked professional goals higher).

Table III.

Personal Goal Scores by Age				
<u>AGE</u>	<u>25 to 37</u>	<u>38 to 64</u>	<u>TOTAL</u>	<u>CHI SQUARE</u>
observed above mean	36	3	39	
observed below mean	35	11	46	
N	71	14	85	calculated 4.0364
significance level = .05				critical 3.8416

Hypotheses Four and Five. **H4: Females will place greater importance on personal goals than will males. H5: Individuals with more years of service will place more importance on personal goals.** The tests of hypotheses four and five, did not produce a significant statistical difference. Summary data and Chi square statistics for H4 and H5 are provided in Tables IV and V. It should be noted that the sample sizes for females (N=15) was rather small.

Hypothesis Six. **H6: Married individuals will place greater value on personal goals than will singles.** The sixth hypothesis was supported at the 0.20 level of significance by the median test on raw goal scores. While the level of significance is not as good as one

Table IV.

Personal Goal Scores by Sex

<u>SEX</u>	<u>MALE</u>	<u>FEMALE</u>	<u>TOTAL</u>	<u>CHI SQUARE</u>
observed above mean	31	8	39	
observed below mean	39	7	46	
N	70	15	85	calculated 0.4072

Table V.

Personal Goal Scores by Years of Service

<u>YEARS SERVICE</u>	<u>1-5</u>	<u>6-10</u>	<u>11-15</u>	<u>over 15</u>	<u>CHI SQUARE</u>
observed above mean	8	14	14	3	
observed below mean	10	14	14	8	
expected above mean	9	14	14	5.5	
expected below mean	9	14	14	5.5	calculated 2.4949

Table VI.

Personal Goal Scores by Marital Status

<u>STATUS</u>	<u>MARRIED</u>	<u>SINGLE</u>	<u>TOTAL</u>	<u>CHI SQUARE</u>
observed above mean	35	4	39	
observed below mean	36	10	46	
N	71	14	85	calculated 2.0227
significance level = .20				critical 1.6400

would like, it is considered supportive of the hypothesis. The fact that only 14 singles participated in the survey may have contributed to the low significance level. Summary and statistical data is provided in Table VI.

Conflict Between Goals. H7: **An individual's personal goals will sometimes conflict with their professional goals.** Although the questions used on the survey had not been tested for validity or reliability, their results are assumed to be indicative of the beliefs of the sample. The seventh hypothesis was strongly supported with 84.7% of the participants reporting having experienced such conflict either during their current job experience or at some other time in the past (question #3).

Questions one and two also were also concerned with conflict between personal and professional goals. Question one asked, "To what degree are your professional and personal goals compatible in that attainment of the one does not interfere with the other?" Two of the respondents replied "not at all compatible" and 42 participants responded "somewhat compatible." Therefore, over half of the respondents (51.7%) believed their personal and professional goals were less than "very compatible."

Question two asked, "Do you now experience conflict between your personal and professional goals?" The majority of respondents (52) answered, "somewhat" while only 15 answered, "not at all." Therefore, most respondents (61.1%) reported that they currently experienced some conflict between their personal and professional goals.

Levels of Conflict by Demographic Categories. H8: Older individuals will experience less conflict between personal and professional goals. This hypothesis received mixed support from the survey. Analysis of question 1, "To what degree are your professional and personal goals compatible in that attainment of the one does not interfere with the other?", supported the hypothesis at the .20 significance level (see Table VII); while analysis of question 2 did not (See Table VIII).

Table VII.

Compatibility Between Goals by Age

<u>AGE</u>	<u>25 to 30</u>	<u>31 to 64</u>	<u>TOTAL</u>	<u>CHI SQUARE</u>	
observed above mean	10	31	41		
observed below mean	17	27	44		
N	27	58	85	calculated	1.9872
significance level = .20				critical	1.6400

Table VIII.

Conflict Between Goals by Age

<u>AGE</u>	<u>25 to 30</u>	<u>31 to 64</u>	<u>TOTAL</u>	<u>CHI SQUARE</u>	
observed above mean	6	12	18		
observed below mean	21	46	67		
N	27	58	85	calculated	0.0259

Individuals between the ages of 25 and 30 tended to answer question 1 below the mean Likert score more often than did individuals over the age of 30. This would indicate that older individuals see their personal and professional goals as more compatible than younger individuals. However, when asked by question 2, "Do you now experience conflict between your personal and professional goals?", there was little difference by age groups about the mean Likert score. Therefore, it is apparent that the participants did not equate compatibility of goals and conflict between goals in their responses.

Hypothesis Nine. **H9: Females will report more conflict between personal and professional goals.** Hypothesis nine was not supported by the evidence in the survey. Females were not found to report more conflict between personal and professional goal than did men by either question 1 or 2. Summary data and Chi square statistics are provided in Tables IX and X.

Table IX.

Compatibility Between Goals by Sex

<u>SEX</u>	<u>MALE</u>	<u>FEMALE</u>	<u>TOTAL</u>	<u>CHI SQUARE</u>
observed above mean	30	8	38	
observed below mean	40	7	47	
N	70	15	85	calculated 0.5484

Table X.

Conflict Between Goals by Sex

<u>SEX</u>	<u>MALE</u>	<u>FEMALE</u>	<u>TOTAL</u>	<u>CHI SQUARE</u>
observed above mean	15	3	18	
observed below mean	55	12	67	
N	70	15	85	calculated 0.0151

Hypothesis Ten. H10: Married individuals will report more conflict between personal and professional goals than singles. Hypothesis ten was supported by question 1 but not by question 2. When asked if their personal and professional goals were compatible, married individuals were inclined to answer below the mean Likert score while singles answered above the mean (see Table XI). Therefore, the null hypothesis, that there was no difference in the means of the two samples, was rejected at the 0.05 level of significance indicating that married individuals tend to see their personal and professional goals as less compatible than do singles. Yet, when asked about conflict between personal and professional goals there was no significant difference between the two groups (see Table XII).

Resolution of Conflict. H11: If a conflict exist between accomplishment of personal and professional goals, an individual will tend to favor accomplishment of the personal goals over the professional. Support for this hypothesis was analyzed based on answers to question four, "If you have experienced such conflicts, how did you most often resolve them?" The possible responses and the number of responses

Table XI.

Compatibility Between Goals by Marital Status

<u>STATUS</u>	<u>MARRIED</u>	<u>SINGLE</u>	<u>TOTAL</u>	<u>CHI</u>	<u>SQUARE</u>
observed above mean	28	10	38		
observed below mean	43	4	47		
N	71	14	85	calculated	4.8417
significance level = .05				critical	3.8414

Table XII.

Conflict Between Goals by Marital Status

<u>STATUS</u>	<u>MARRIED</u>	<u>SINGLE</u>	<u>TOTAL</u>	<u>CHI</u>	<u>SQUARE</u>
observed above mean	15	3	18		
observed below mean	56	11	67		
N	71	14	85	calculated	0.0006

for each are listed below in Table XIII. As is indicated by the results, individuals reported that they most often resolved such conflicts in favor of professional goals. While the hypothesis was not well supported with only 16.4% of the respondents reporting resolution of conflict in favor of personal goals, it is interesting that 24.7% of the respondents were able to resolve most conflicts in favor of both professional and personal goals.

Table XIII.

Resolution of Conflicts

<u>Possible Answers</u>	<u>Number of Responses</u>	
In favor of PERSONAL goals.	14	16.4%
In favor of PROFESSIONAL goals.	31	36.4%
In favor of BOTH professional and personal goals.	21	24.7%
At the EXPENSE OF BOTH.	8	9.4%
I DID NOT resolve the conflicts.	2	2.3%

A discussion of the results of this research is presented in chapter V.

V. DISCUSSION

Results of Major Hypotheses

As was stated in Chapter II, Hypotheses 1, 2, 7, and 11 were the major hypotheses of this research effort. The Summary of Results on the following page indicates that of these, Hypotheses 1, 2 and 7 received strong support while hypothesis 11 was not supported. The basic conclusions one can draw from the results for these major hypotheses are as follows:

- a. Individuals tend to have personal goals which are different than their professional goals.
- b. An individual's personal goals tend to be of more importance to him/her than his/her professional goals.
- c. Individuals sometimes experience conflict between their personal and professional goals.
- d. Individuals most often resolve conflict between their personal and professional goals in favor of professional goals.

Resolution of Conflict. While the result for H11 was unexpected, it may help explain the very strong support received by H7. If individuals were able to resolve conflicts most often in favor of their personal goals (which are most important to them), then one would expect that the percentage of people who experienced conflict would be much smaller than the 84.7% indicated by the research. In other words, if one could resolve conflicts in favor of the goals which are most important, then one would not be as likely to perceive the conflict.

Table XIV.

Summary of Hypotheses and Results

H1: The personal goals an individual has will be different than the professional goals that individual has.	Supported by 89.4% of the responses.
H2: An individual's personal goals will be of more importance to him/her than his/her professional goals.	Supported by rankings of the personal and professional goals. Tested at .005 level of significance.
H3: Older individuals will place a greater importance on personal goals than will younger individuals.	Not supported.
H4: Females will place greater importance on personal goals than will males.	Not supported.
H5: Individuals with more years of service will place more importance on personal goals.	Not supported.
H6: Married individuals will place greater value on personal goals than will singles.	Supported at .20 level of significance.
H7: An individual's personal goals will sometimes conflict with their professional goals.	Supported by 84.7% of the participants.
H8: Older individuals will experience less conflict between personal and professional goals.	Mixed support from questions one and two.
H9: Females will report more conflict between personal and professional goals.	Not supported.
H10: Married individuals will report more conflict between personal and professional goals than singles.	Mixed support from questions one and two.
H11: An individual will tend to favor accomplishment of personal goals over professional.	Not supported.

As a result, it seems that when individuals must choose between their personal and professional goals, they are most often forced into pursuit of their professional goals and denial of their personal goals. This could lead to individual frustration and dissatisfaction both on and off the job if the conflicts were frequent and/or persisted over an extended amount of time. In such a case, the result might be what Albanese describes as "destructive conflict [1:45]."

Albanese contends that "attempts to integrate individual goals and organizational goals can result in: no conflict; destructive conflict; or workable conflict and cooperation" [1:44,46]. Thus, the level of conflict could be viewed as a continuum with no conflict at one extreme and destructive conflict at the other, and workable conflict in the middle. If some level of conflict exists, then it is the product of some process which has an influence on human behavior. In this author's opinion, that process is the cognitive and subconscious evaluation of alternative objectives or goals which may be pursued on or off the job. The choices an individual makes as to which goals to pursue and which to forego determine the level of conflict which will result.

If individual goals are selected which are completely compatible with organizational goals, then no conflict will arise and accomplishment of the organizational goals will be congruent with accomplishment of the individual goals. If selection of individual goals is completely incompatible with organizational goals, then destructive conflict will arise resulting in "turnover, absenteeism, low productivity, or even sabotage" [1:45]. Most conflict, however, probably falls somewhere in the middle of the continuum, resulting in sacrifice of either individual

goals or organizational goals in order to achieve the other more important goals. These sacrifices are made possible through the recognition of mutual need between the organization and the individual (1:47).

As long as the bond of mutual need is strong and the level of conflict is not too high, the individual is able to adjust his/her priorities so that neither the personal nor the professional goals are totally denied. Some of the respondents reported personal and professional goals which were very compatible such as the individual who wanted to tour Europe as a personal goal and wanted an assignment to Headquarters USAFE as a professional goal. Another individual wanted to read more as a personal goal and wanted to learn more about his job through reading as a professional goal. Thus, one action could concurrently satisfy two goals. In cases such as these, conflict was reduced to a minimum.

Influence of the Off-the-job Environment. The results reported in Chapter III for H1 and H2 strongly support the main contention of this research effort; that the off-the-job environment has a stronger influence on individuals than the on-the-job environment. Most respondents had personal goals which were different than their professional goals and most ranked their personal goals higher. If the on-the-job environmental influence had been the stronger, one would have expected to have seen professional goals ranked higher. Therefore, it is not unreasonable to assume that the strong influence of the off-the-job environment on the individual will in some way affect that individual's motivation on the job.

Demographic Differences. Significant differences by demographic categories were not found for most categories tested. One unexpected result was discovered while testing hypothesis three. H3: Older individuals will place a greater importance on personal goals than will younger individuals. The hypothesis was tested based on the null hypothesis that there was no difference in the two test groups. A significant difference was found, but the direction of the difference indicated that in fact, older individuals place a greater importance on professional goals than do younger individuals. There are several possible explanations for this difference. One is that the older individuals are finally in a position which will allow the accomplishment of significant professional goals. Additionally, older individuals are more likely to have accomplished many of their significant personal goals such as raising a family, and are now free to pursue their professional goals with more vigor.

As a result of this finding, one is forced to conclude that the off-the-job environment has a stronger influence on most younger individuals, while the on-the-job environment has a stronger influence on most older individuals.

Possible Results of Off-the-job Environmental Influences. The literary review in Chapter II indicated there were five major variables in the cognitive process which determines levels of motivation to attain a goal. The major variables were the strength of the (1) underlying need, and the perceptions of (2) one's ability, of (3) the effort-performance probability, of (4) the performance reward-probability, and of (5) the value of the reward toward satisfaction of the need. It was

further determined that the general and specific environment will have an effect on the individual's needs and perceptions. This study indicated that the off-the-job environment has a stronger influence on these major variables than does the on-the-job environment. Therefore, the specific off-the-job environment could account for some of the variation in individual motivation which has heretofore been ascribed to individual differences.

For example, if management offers a reward to a group of employees which is designed to satisfy a widely felt need, some of the employees will be highly motivated to attain the reward while others will not be noticeably affected. Management may conclude that some employees cannot be motivated; however, the truth may be that although the need is widely felt, it may also be widely satisfied off the job. Therefore, for some employees, the strength of the need, and thus the value of the reward, is not sufficient to justify the additional effort required to attain the goal.

In other cases, although the need may be strongly felt, the off-the-job environment may have affected the employee's perceptions so that the perceived value of the reward has been diminished. For example, an attitude such as "money can't buy happiness" may be fostered by the off-the-job environment and thus reduce the effectiveness of monetary rewards. Additionally, poor performance in the off-the-job environment could affect an individual's perception of ability, and thus the expectancy of success could be reduced by the resulting lack of confidence.

Chapter VI presents the conclusions drawn from this research.

VI. Summary and Recommendations

Summary

The major objective of this research was to determine if there was a significant influence on the motivation and behavior of the worker on the job caused by the specific off-the-job environment. To accomplish this objective, it was necessary to explain a mechanism through which these off-the-job environmental factors could influence the worker. This was accomplished through the examination of several motivation theories and two unified models of human motivation and behavior.

From the examination of these theories and models, the conclusion was drawn that the general environment has a significant influence on the major determinant factors of motivation; needs and perceptions. It was further determined that the process which determines levels of motivation on the job was the same process which determines an individual's level of motivation to accomplish a goal; be it a personal goal or a professional goal.

The assumption was made that the general environment could be divided into two relatively separate specific environments, the off-the-job environment and the on-the-job environment. It was also assumed that an individual's personal goals would be more strongly affected by his/her off-the-job environment while his/her professional goals would be more strongly affected by the on-the-job environment. Thus, the conclusion was drawn that an individual's personal goals would reflect the strength of the influence of the off-the-job environment on the individual while the professional goals would reflect the strength

of the influence of the on-the-job environment on the individual.

Therefore, if an individual had personal goals which were more important to him/her than his/her professional goals, one could conclude that the off-the-job had a stronger influence on that individual than did the on-the-job environment. Since it is reasonable to assume that an individual has only one set of needs and perceptions, and since the motivation to attain a goal is largely determined by an individual's needs and perceptions which are in turn influenced by the specific environments; one can conclude that there is a significant probability that the specific environment which has the stronger influence on the individual will also influence that individual's motivation and behavior in the other specific environment.

Major Hypotheses. Four major hypotheses were developed to test the relative strengths of the influences of the off-the-job and on-the-job environments on the individual. The four major hypotheses are listed below.

- H1: The personal goals an individual has will be different than the professional goals that individual has.
- H2: An individual's personal goals will be of more importance to him/her than his/her professional goals.
- H7: An individual's personal goals will sometimes conflict with their professional goals.
- H11: If a conflict exist between accomplishment of personal and professional goals, an individual will tend to favor accomplishment of the personal goals over the professional.

A summary of the major findings of this research effort is provided below.

- a. Individuals tend to have personal goals which are different than their professional goals.
- b. An individual's personal goals tend to be of more importance to him/her than his/her professional goals.
- c. Individuals sometimes experience conflict between their personal and professional goals.
- d. Individuals most often resolve conflict between their personal and professional goals in favor of professional goals.

As a result of the findings of this research, one can conclude that the off-the-job environment has a stronger influence on most individuals than the on-the-job environment and that this influence is strongest in the younger individuals. The data also suggested that there is no difference between men and women or by years of service in this phenomena. Additionally, one can conclude that most individuals experience some conflict between their personal and professional goals and that the conflict is most often resolved in favor of professional goals. The test between demographic categories concerning conflict did not provide consistent substantial differences between groups. Therefore, the data suggest that the level of conflict an individual experiences is not dependent on age, sex, or marital status.

Recommendations

This research indicates a need to more closely examine the relationship between off-the-job environmental factors and motivation on the job. The implication is that the family and social influences have a

greater potential for determining those things which will result in individual motivation than do factors on the job. Therefore, if management can simply gain a better understanding of those off-the-job environmental factors, then management will be better prepared to determine what types of motivational programs will provide the greatest benefit to both the individual and the organization.

The implication for management and research is that one must not limit the the search for important influences on the motivational process to the on-the-job environment. The finding that younger individuals are more likely to place greater importance on personal goals than are older individuals may be essential in this effort. This implies that the off-the-job environment has a greater influence on younger individuals and that younger individuals would be more apt to experience conflict between personal and professional goals.

Management should be especially sensitive to the needs and perceptions of the younger members of the work force and attempt to determine appropriate rewards which will allow the worker to satisfy those needs and which are compatible with the perceptions of the younger worker. Additionally, the organization can work to change the perceptions of the workers by altering the off-the-job environment if feasible.

Further research in this area is indicated. Since the youngest participants in this research effort were 25, a repeat of this type of research with a lower minimum age is indicated. Additionally, the percentage of women and singles who participated in this research effort was low and some significant demographic differences may have been missed as a result.

Appendix A: Crawford Slip Survey

GENERAL INFORMATION

This survey is part of a thesis being conducted by Capt Wesley W. Westbrook. The survey is designed to test a hypothesis concerning motivation. It is a simple exercise which should take about 20 minutes to complete.

You will not be required to give your name and no effort will be made to identify any individuals as a result of this survey. The personal and professional information requested will be used only to attempt to establish correlations between categories of responses.

The survey is given in four parts. When you have completed each part, raise your hand and you will be given the next. Likewise, when you finish the survey, raise your hand and the exercise monitor will collect your survey. The instructions for each part are at the beginning of each section. PLEASE READ THE INSTRUCTIONS CAREFULLY AND ANSWER THE QUESTIONS TO THE BEST OF YOUR ABILITY.

CATEGORICAL DATA

INSTRUCTIONS: Please provide the information requested below in the space provided.

AGE: _____ RANK/GRADE: _____ DATE OF RANK/GRADE: _____

YEARS OF ACTIVE DUTY OR CIVILIAN SERVICE: _____ SEX: _____

AFSC or JOB TITLE: _____ STUDENT/FACULTY/STAFF: _____

MARRIED/SINGLE? _____ NUMBER OF DEPENDENTS. _____

PART ONE

Detach the slips of paper below. On these slips, please write the TOP THREE GOALS for your PROFESSIONAL career, one per slip. These professional goals should be goals which you CLOSELY ASSOCIATE WITH YOUR CAREER. Each one should be a goal which you hope to accomplish ON THE JOB, or which you hope to accomplish off the job in order to enhance your job in some way.

PLEASE BE SPECIFIC. Goals such as "BECOME A BETTER OFFICER" are NOT specific enough since most professional goals could fall into that category. Rather, be specific in what actions you would take to accomplish that broad objective.

Each of these professional goals you cite should be the goals which are most important to YOU, not necessarily those which the Air Force or others might deem important.

When you have completed this portion of the exercise, please raise your hand indicating you are ready for PART 2. Thank you.

PART TWO

Detach the slips of paper below. On these slips, please write the TOP THREE GOALS for your PERSONAL life, one per slip. These personal goals should be goals which you believe to be most important in your personal life OFF THE JOB.

PLEASE BE SPECIFIC. Goals such as "IMPROVE MY LIFE" are NOT specific enough since almost all personal goals would in some way improve your life. Rather, describe what specific part of your life you wish to improve, or what actions you plan to take to accomplish that broad objective.

Again, these should be the goals which YOU think are important, not necessarily those which others might deem important.

When you have completed this portion of the exercise, please raise your hand indicating you are ready for PART 3. Thank you.

PART THREE

You now have before you six slips of paper reflecting six goals (the top three professional goals and the top three personal goals) you have identified for yourself. PLACE THE SIX SLIPS OF PAPER IN FRONT OF YOU ON THE DESK.

THINK ABOUT THEM FOR A FEW MOMENTS.

When you are ready, arrange them on your desk in order of importance. In so doing, you are encouraged to PHYSICALLY REARRANGE them as many times as necessary, experimenting with different orderings, until you are satisfied that the ranking reflects your true feelings.

Now, in the space provided below, please record the final ranking you settled on; # 1 being the MOST IMPORTANT of the six, and # 6 the LEAST IMPORTANT of the six.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Please hold up your hand to receive part four.

Appendix B: Conflict Survey

PART FOUR

QUESTIONS:

1. To what degree are your professional and personal goals compatible in that attainment of the one does not interfere with the other.
 - a. NOT AT ALL COMPATIBLE
 - b. SOMEWHAT COMPATIBLE
 - c. NOT SURE
 - d. VERY MUCH COMPATIBLE
 - e. COMPLETELY COMPATIBLE
2. Do you now experience conflict between your personal and professional goals?
 - a. NOT AT ALL
 - b. SOMEWHAT
 - c. NOT SURE
 - d. VERY OFTEN
 - e. ALWAYS
3. Have you ever in the past (at your current job or some previous job) experienced conflicts between your professional and personal goals?

YES NO
4. If you have experienced such conflicts, how did you most often resolve them?
 - a. In favor of PERSONAL goals.
 - b. In favor of PROFESSIONAL goals.
 - c. In favor of BOTH professional and personal goals.
 - d. At the EXPENSE OF BOTH professional or personal goals.
 - e. I DID NOT resolve the conflicts.

When you have completed these questions, please raise your hand and the exercise monitor will collect your materials.

AGAIN, THANK YOU FOR YOUR PARTICIPATION IN THIS RESEARCH EFFORT.

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VITA

Captain Wesley W. Westbrook was born on the 29th day of December 1950 in Lubbock, Texas. He enlisted in the Air Force on 9 May 1975 as a Nuclear Weapons Mechanic and was assigned to the 2nd MMS at Barksdale AFB, Louisiana. He graduated Magna Cum Laude from Louisiana Tech University in November 1978 with a B.S. in Aviation Technology. In August 1979, Captain Westbrook was a Distinguished Graduate from Officer Training School at Lackland AFB, Texas and received his commission as a Munitions Maintenance Officer. After attending technical school, he was assigned to the 400 MMS (Theater) at Kadena AB, Okinawa, Japan in January 1980. Two years later he was selected to join the HQ PACAF staff as a Weapons Safety and Missile Maintenance Inspector for the PACAF Inspector General at Hickam AFB, Hawaii where he remained until entering the Air Force Institute of Technology School of Systems and Logistics in May 1985.

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The basic premise of the systems theory is that entities within a system interact with the environment and other systems in a manner which makes it impossible to change or influence one entity without affecting all the other entities to some degree. This research attempted to treat the worker as an integral part of a system affected by two distinct environments, the Off-the-job environment, and the On-the-job environment. The major objective of the study was to determine which of the two environments has the stronger influence on the motivation factors in the individual; with the reasoning that the stronger of the two environmental influences will affect the individual's behavior in the other environment. Individual goals were selected as the measure of environmental influence on individuals for this study since goals should be the product of a person's needs and perceptions, two major determinants of motivation.

Survey participants were asked to list their personal and professional goals (using the Crawford Slip survey method), and then rank order the goals. A large majority of respondents ranked personal goals higher than professional goals indicating that the off-the-job environment has a greater influence on the factors which affect human motivation and thus, behavior within the test group. This was especially true for the younger participants (25 to 37). A summary of the major findings of this research effort is provided below:

- (1) Individuals tend to have personal goals which are different than their professional goals,
- (2) An individual's personal goals tend to be of more importance to him/her than his/her professional goals,
- (3) Individuals sometimes experience conflict between their personal and professional goals, and
- (4) Individuals most often resolve conflict between their personal and professional goals in favor of professional goals.

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